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In my code, I have two kinds of model. One is for Q = 0 and the other is for Q = S. We were given a task to follow the given architecture which has arrival, queue, service, and departure. The pseudocode is there so I basically followed it which is for the simulation where in it is the time also S = 1, 5, 10. I also used the poisson distribution function of C++ to generate random numbers depending on the condition/variable like mu and lambda for the customers and leave. Then for Q = 0, I have two while loops. The first while loop is for arrival and the condition is while there are customers. Inside the while loop, I have a condition if the server is full. If the server is full, I block the customer then decrement the customer otherwise if it's not full I'll increment the serving and decrement the customers. Then the second while loop is for departure and the condition is while there is someone leaving. So I check if there is still people serving. If there are customers being served, then I decrement the serving and the leave. Otherwise, I break the while loop. Then I calculate the blocking probability by dividing the accumulated value of block then divide it with the number of arrivals. For Q = S, I also have two while loops which are also for arrival and departure. The only difference is the arrival part where in the queue is now implemented. While there is a queue, we decrement the queue and increment the server. Then if the server is full and the queue is full, the customers will be blocked and customers will decrement. Otherwise if server is not full, customer can queue then decrement customer. For the departure while loop, it is still the same. We then do the same thing by diving the accumulated number of blocks with the number of arrivals to get the blocking probability.